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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,137	07/12/2001	Andrew Robert Oakley	31229-173019	8041

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EXAMINER	
PESIN, BORIS M	
ART UNIT	PAPER NUMBER
2174	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,137	OAKLEY ET AL.	
	Examiner	Art Unit	
	Boris Pesin	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This communication is responsive to the amendment filed 08/24/2005.

Claims 1-20 are pending in this application. Claims 1, 15, and 18 are independent claims. In the amendment filed 08/24/2005, claims 1, 2, 4, 5, 6, 7, 10, 11, 12, 15, 16, 17, 17 and 18 were amended. This action is made Non-Final.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 7, 10, 15, 17, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Norwood (US 5063600).

In regards to claim 1, Norwood teaches an interactive display system comprising a device onto which an image is projected (Figure 1A, Element 20), computing means (Figure 1A, "Computer") and at least one remote signaling device (Figure 1A, Elements 24 and 38), in which the computing means is arranged to supply image information to the device onto which an image is projected (Figure 1, Elements 23); in which the at least one remote signaling device is operable to transmit signals to a receiver portion of

the device onto which an image is projected (Figure 1A, Element 24), the device onto which an image is projected being arranged to supply the signals to the computing means (Figure 1A, Element 23), said signals being stored by the computing means for display, and in which the display device is a communications hub of the display system arranged to receive control signals from a pointing device and/or a remote control device and arranged to transmit those signals to the computing means in order to control an image on the device onto which an image is projected (Figure 1A, Elements 19, 22, and 23).

In regards to claim 4, Norwood teaches an interactive display system, in which the at least one remote signaling device is a remote control device which is operable to transmit control signals to a receiver portion of the device onto which an image is projected, which control signals are supplied to the computing means and are operable to control the computing means and thus image information supplied to the device onto which an image is projected (Figure 1A, Elements 38 and 24).

In regards to claim 5, Norwood teaches an interactive display system, in which the display device includes position indication means for indicating the position of a pointing device relative to a surface of the display device. (i.e. Figure 1A, Element 22).

In regards to claim 7, Norwood teaches an interactive display system as claimed in claim 1, in which the pointing device is operable to induce image control signals in the position indication means, which image control signals are operable to control the computing means and thus image information is displayed on the device onto which an image is projected (Figure 4, Element 120).

In regards to claim 10, Norwood teaches an interactive display system, in which the device onto which an image is projected includes an output portion arranged to transmit signals from both the receiver portion and the position indication means to the computing means (Figure 1A, Elements 19, and 23).

In regards to claim 15, Norwood teaches a method of operating an interactive display system comprises projecting an image of a computer display of a computer onto a device onto which an image is projected (Figure 1A, Element 20) receiving signals at a receiver portion of the device, which signals are transmitted from at least one remote signaling device (Figure 1A, Element 22), and transmitting those signals to the computer, to thereby manipulate the image projected onto the device onto which an image is projected (Figure 1A, Element 19), in which the device onto which an image is projected is a communications hub of the display system arranged to receive control signals from a pointing device and/or a remote control device and arranged to transmit those signals to the computing means in order to control an image on the device onto which an image is projected (Figure 1A, Elements 19, 22, and 23).

In regards to claim 17, Norwood teaches a method, in which the signals from at least one remote signaling device are transmitted in response to information displayed on the device onto which an image is projected (Figure 1A, Element 25).

In regards to claim 18, Norwood teaches an interactive device onto which an image is projected comprising a receiver portion for receiving signals from a remote signaling device (Figure 1A, Element 22), the device onto which an image is projected being operable to supply the received signals to a computing means (Figure 1A,

Element 19) and being suitable for displaying an image from a computing means received by said device onto which an image is projected (Figure 1A, Elements 20 and 23), in which said interactive device onto which an image is projected forms a communication hub for an interactive display system (Figure 1A, Elements 19, 22, and 23).

In regards to claim 19, Norwood teaches a remote signaling device for use with the interactive display system (Figure 1A, Element 24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600) in view of Montlick (US 5561446).

In regards to claim 2, Norwood teaches all the limitations of claim 1. Norwood does not teach an interactive display system in which the device onto which an image is projected uses a single communications link between it and the computing means, which link is arranged to convey signals both from the pointing device and the at least one remote signaling device, to enable a most efficient transfer of data. Montlick teaches, "One or more portable pen-based computers are provided with wireless communication capability for connecting with the central computer system through the wireless network." (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood with the teachings of Montlick and include a single communications link with the motivation to provide for greater portability.

In regards to claim 3, Norwood and Montlick teach all the limitations of claim 2. Norwood and Montlick further teach an interactive display system in which the single link is a wireless connection ("One or more portable pen-based computers are provided with wireless communication capability for connecting with the central computer system through the wireless network." Montlick, Abstract).

Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600).

In regards to claim 6, Norwood teaches all the limitations of claim 1. Norwood does not specifically teach an interactive display system which is operable to calibrate the location of an image on the device onto which an image is projected relative to the

device onto which an image is projected. Official notice is given that it is notoriously well known in the art to calibrate the image's location. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood and include a calibration mechanism with the motivation to provide the user with a better and more accurate image projection.

In regards to claim 13, Norwood teaches all the limitations of claim 1. He does not specifically teach an interactive display system, in which the at least one remote control device is operable to control the computing means in substantially the same manner as a keyboard and mouse combination. Official notice is given that it is well known in the art to use a remote control device as a keyboard or a mouse. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood and include a system to use the remote as a keyboard and/or mouse with the motivation to enable the user to effortlessly perform numerous different tasks on the device.

Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600) in view of Geaghan et al. (US 5790114).

In regards to claim 8, Norwood teaches all the limitations of claim 1. He does not teach an interactive display system, in which the pointing device is arranged to take precedence over the at least one remote signaling device. Geaghan teaches, "Pen or Finger mode detects pen and finger contact, giving priority to pen contact when both are

detected." Column 7, Line 15). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood with the teachings of Geaghan and include a method of giving priority to the pointing device over another device with the motivation to provide for easy control of who gets to write on the tablet at a given time.

In regards to claim 12, Norwood teaches all the limitations of claim 1. He does not teach an interactive display system, in which where a plurality of remote signaling devices are provided, the device onoto which an image is projected requests information from each remote signaling device in turn, by polling. Geaghan teaches, "the driver employs polling rather than interrupts to determining if data is available at the serial port" Column 14, Line 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood with the teachings of Geaghan and include a method for polling devices in order to obtain data in a desired manner with the motivation to provide for an orderly and easy method of obtaining data.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600) in view of Krumholz (US 4538993).

In regards to claim 9, Norwood teaches all the limitations of claim 1. He does not teach an interactive display system in which the pointing device is operable to selectively enable the at least one remote signaling device. Krumholz teaches that, "interrupt row enable the teacher to cut off reception of particular student computer outputs" Column 4, Line 11). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood with the teachings of Krumholz and

include a method to enable remote signaling devices with the motivation to have easy control of who gets control of the tablet at a given time.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600) in view of Hassan et al. (US 5689562).

In regards to claim 11, Norwood teaches all the limitations of claim 1. He does not teach an interactive display system, in which the at least one remote signaling device is operable to transmit signals to the receiver portion only in response to a request signal from the device onto which an image is projected. Hassan teaches, "The image control unit 10 starts the image transmission process by sending an image data request to the image transmission unit 20." (Column 8, Line 14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood with the teachings of Hassan and system that transmits signals to the receiver portion only in response to a request with the motivation to provide for better control of signals passed around the system.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600) in view of Lin et al. (US 5528235).

In regards to claim 14, Norwood teaches all the limitations of claim 1. He does not teach an interactive display system in which the system comprises one master control device which is a remote control device or a pointing device, and a plurality of subsidiary remote signaling devices. Lin teaches, "the present invention can be used as

a control keypad for a variety of household appliances such as master remote control device for integrated audio-video entertainment, microwave oven, security alarm panel and the like" Column 8, Line 27). It is inherent in Lin's invention that numerous other remote signaling devices are present but only one that controls all of the devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood with the teachings of Lin and include a master remote control with the motivation to provide for more control over the devices.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600) in view of Junod et al. (US 5854621).

In regards to claim 16, Norwood teaches all the limitations of claim 15. He does not teach a method wherein the signals from the at least one remote signaling device are independent of the location of the remote signaling device relative to the device onto which an image is projected. Junod teaches, a wireless radio frequency ("RF") communications interface between peripherals and the host personal computer or workstation. In one embodiment, the present invention provides a wireless electronic mouse which uses an RF transmitter to transmit information unidirectionally to a receiver which is coupled to a host computer." (Abstract, Line 1). It is well known in the art that RF devices, such as taught by Junod, transmit their signals independently of their location relative to the display. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood with the teachings of Junod and include a device such as a RF wireless mouse, with the motivation to provide the user

more flexibility in moving around the room and still being able to control what is on the screen.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norwood (US 5063600) in view of Montlick (US 5561446) in further view of Junod et al. (US 5854621).

In regards to claim 20, Norwood and Montlick teach all the limitations of claim 3. Norwood and Montlick do not specifically teach a display system wherein the wireless connection is one of infra red means or radio means. Junod teaches, a wireless radio frequency ("RF") communications interface between peripherals and the host personal computer or workstation. In one embodiment, the present invention provides a wireless electronic mouse which uses an RF transmitter to transmit information unidirectionally to a receiver which is coupled to a host computer." (Abstract, Line 1). It is well known in the art that RF devices, such as taught by Junod, transmit their signals independently of their location relative to the display. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Norwood and Montlick with the teachings of Junod and include a device such as a RF wireless mouse, with the motivation to provide the user more flexibility in moving around the room and still being able to control what is on the screen.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris Pesin whose telephone number is (571) 272-4070. The examiner can normally be reached on Monday-Friday except every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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